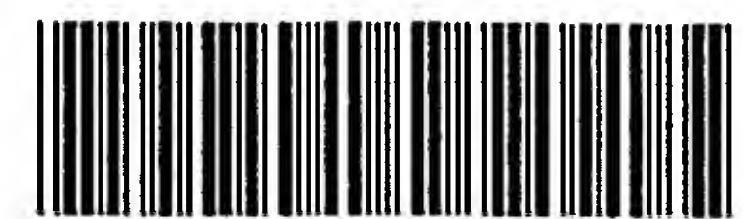


## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.**

Application Serial Number: 10/560,726  
Source: ITWP  
Date Processed by STIC: 4-14-06

***ENTERED***



IFWP

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/560,726

DATE: 04/14/2006  
TIME: 10:45:46

Input Set : A:\21788wo.ST25.txt  
Output Set: N:\CRF4\04142006\J560726.raw

3 <110> APPLICANT: DSM IP Assets B.V.  
5 <120> TITLE OF INVENTION: Feedback-resistant mevalonate kinases  
7 <130> FILE REFERENCE: Case 21788  
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/560,726  
C--> 9 <141> CURRENT FILING DATE: 2005-12-08  
9 <150> PRIOR APPLICATION NUMBER: EP 03012294.9  
10 <151> PRIOR FILING DATE: 2003-06-12  
12 <160> NUMBER OF SEQ ID NOS: 33  
14 <170> SOFTWARE: PatentIn version 3.2  
16 <210> SEQ ID NO: 1  
17 <211> LENGTH: 378  
18 <212> TYPE: PRT  
19 <213> ORGANISM: Paracoccus zeaxanthinifaciens  
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27 Ile Leu Ser Gly Glu His Ser Val Leu Tyr Gly Ala Pro Ala Leu Ala  
28 20 25 30  
31 Met Ala Ile Ala Arg Tyr Thr Glu Val Trp Phe Thr Pro Leu Gly Ile  
32 35 40 45  
35 Gly Glu Gly Ile Arg Thr Thr Phe Ala Asn Leu Ser Gly Gly Ala Thr  
36 50 55 60  
39 Tyr Ser Leu Lys Leu Leu Ser Gly Phe Lys Ser Arg Leu Asp Arg Arg  
40 65 70 75 80  
43 Phe Glu Gln Phe Leu Asn Gly Asp Leu Lys Val His Lys Val Leu Thr  
44 85 90 95  
47 His Pro Asp Asp Leu Ala Val Tyr Ala Leu Ala Ser Leu Leu His Asp  
48 100 105 110  
51 Lys Pro Pro Gly Thr Ala Ala Met Pro Gly Ile Gly Ala Met His His  
52 115 120 125  
55 Leu Pro Arg Pro Gly Glu Leu Gly Ser Arg Thr Glu Leu Pro Ile Gly  
56 130 135 140  
59 Ala Gly Met Gly Ser Ser Ala Ala Ile Val Ala Ala Thr Thr Val Leu  
60 145 150 155 160  
63 Phe Glu Thr Leu Leu Asp Arg Pro Lys Thr Pro Glu Gln Arg Phe Asp  
64 165 170 175  
67 Arg Val Arg Phe Cys Glu Arg Leu Lys His Gly Lys Ala Gly Pro Ile  
68 180 185 190  
71 Asp Ala Ala Ser Val Val Arg Gly Gly Leu Val Arg Val Gly Gly Asn  
72 195 200 205  
75 Gly Pro Gly Ser Ile Ser Ser Phe Asp Leu Pro Glu Asp His Asp Leu  
76 210 215 220  
79 Val Ala Gly Arg Gly Trp Tyr Trp Val Leu His Gly Arg Pro Val Ser

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/560,726

DATE: 04/14/2006

TIME: 10:45:46

Input Set : A:\21788wo.ST25.txt  
Output Set: N:\CRF4\04142006\J560726.raw

80 225 230 235 240  
83 Gly Thr Gly Glu Cys Val Ser Ala Val Ala Ala Ala His Gly Arg Asp  
84 245 250 255  
87 Ala Ala Leu Trp Asp Ala Phe Ala Val Cys Thr Arg Ala Leu Glu Ala  
88 260 265 270  
91 Ala Leu Leu Ser Gly Gly Ser Pro Asp Ala Ala Ile Thr Glu Asn Gln  
92 275 280 285  
95 Arg Leu Leu Glu Arg Ile Gly Val Val Pro Ala Ala Thr Gln Ala Leu  
96 290 295 300  
99 Val Ala Gln Ile Glu Glu Ala Gly Gly Ala Ala Lys Ile Cys Gly Ala  
100 305 310 315 320  
103 Gly Ser Val Arg Gly Asp His Gly Gly Ala Val Leu Val Arg Ile Asp  
104 325 330 335  
107 Asp Ala Gln Ala Met Ala Ser Val Met Ala Arg His Pro Asp Leu Asp  
108 340 345 350  
111 Trp Ala Pro Leu Arg Met Ser Arg Thr Gly Ala Ala Pro Gly Pro Ala  
112 355 360 365  
115 Pro Arg Ala Gln Pro Leu Pro Gly Gln Gly  
116 370 375  
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120 <211> LENGTH: 396  
121 <212> TYPE: PRT  
122 <213> ORGANISM: homo sapiens  
124 <400> SEQUENCE: 2  
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127 1 5 10 15  
130 His Gly Glu His Ala Val Val His Gly Lys Val Ala Leu Ala Val Ser  
131 20 25 30  
134 Leu Asn Leu Arg Thr Phe Leu Arg Leu Gln Pro His Ser Asn Gly Lys  
135 35 40 45  
138 Val Asp Leu Ser Leu Pro Asn Ile Gly Ile Lys Arg Ala Trp Asp Val  
139 50 55 60  
142 Ala Arg Leu Gln Ser Leu Asp Thr Ser Phe Leu Glu Gln Gly Asp Val  
143 65 70 75 80  
146 Thr Thr Pro Thr Ser Glu Gln Val Glu Lys Leu Lys Glu Val Ala Gly  
147 85 90 95  
150 Leu Pro Asp Asp Cys Ala Val Thr Glu Arg Leu Ala Val Leu Ala Phe  
151 100 105 110  
154 Leu Tyr Leu Tyr Leu Ser Ile Cys Arg Lys Gln Arg Ala Leu Pro Ser  
155 115 120 125  
158 Leu Asp Ile Val Val Trp Ser Glu Leu Pro Pro Gly Ala Gly Leu Gly  
159 130 135 140  
162 Ser Ser Ala Ala Tyr Ser Val Cys Leu Ala Ala Leu Leu Thr Val  
163 145 150 155 160  
166 Cys Glu Glu Ile Pro Asn Pro Leu Lys Asp Gly Asp Cys Val Asn Arg  
167 165 170 175  
170 Trp Thr Lys Glu Asp Leu Glu Leu Ile Asn Lys Trp Ala Phe Gln Gly  
171 180 185 190  
174 Glu Arg Met Ile His Gly Asn Pro Ser Gly Val Asp Asn Ala Val Ser

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/560,726

DATE: 04/14/2006  
TIME: 10:45:46

Input Set : A:\21788wo.ST25.txt  
Output Set: N:\CRF4\04142006\J560726.raw

175 195 200 205  
178 Thr Trp Gly Gly Ala Leu Arg Tyr His Gln Gly Lys Ile Ser Ser Leu  
179 210 215 220  
182 Lys Arg Ser Pro Ala Leu Gln Ile Leu Leu Thr Asn Thr Lys Val Pro  
183 225 230 235 240  
186 Arg Asn Thr Arg Ala Leu Val Ala Gly Val Arg Asn Arg Leu Leu Lys  
187 245 250 255  
190 Phe Pro Glu Ile Val Ala Pro Leu Leu Thr Ser Ile Asp Ala Ile Ser  
191 260 265 270  
194 Leu Glu Cys Glu Arg Val Leu Gly Glu Met Gly Glu Ala Pro Ala Pro  
195 275 280 285  
198 Glu Gln Tyr Leu Val Leu Glu Glu Leu Ile Asp Met Asn Gln His His  
199 290 295 300  
202 Leu Asn Ala Leu Gly Val Gly His Ala Ser Leu Asp Gln Leu Cys Gln  
203 305 310 315 320  
206 Val Thr Arg Ala Arg Gly Leu His Ser Lys Leu Thr Gly Ala Gly Gly  
207 325 330 335  
210 Gly Gly Cys Gly Ile Thr Leu Leu Lys Pro Gly Leu Glu Gln Pro Glu  
211 340 345 350  
214 Val Glu Ala Thr Lys Gln Ala Leu Thr Ser Cys Gly Phe Asp Cys Leu  
215 355 360 365  
218 Glu Thr Ser Ile Gly Ala Pro Gly Val Ser Ile His Ser Ala Thr Ser  
219 370 375 380  
222 Leu Asp Ser Arg Val Gln Gln Ala Leu Asp Gly Leu  
223 385 390 395  
226 <210> SEQ ID NO: 3  
227 <211> LENGTH: 395  
228 <212> TYPE: PRT  
229 <213> ORGANISM: mouse  
231 <400> SEQUENCE: 3  
233 Met Leu Ser Glu Ala Leu Leu Val Ser Ala Pro Gly Lys Val Ile Leu  
234 1 5 10 15  
237 His Gly Glu His Ala Val Val His Gly Lys Val Ala Leu Ala Ala Ala  
238 20 25 30  
241 Leu Asn Leu Arg Thr Phe Leu Leu Leu Arg Pro Gln Ser Asn Gly Lys  
242 35 40 45  
245 Val Ser Val Asn Leu Pro Asn Ile Gly Ile Lys Gln Val Trp Asp Val  
246 50 55 60  
249 Gly Met Leu Gln Arg Leu Asp Thr Ser Phe Leu Glu Gln Gly Asp Val  
250 65 70 75 80  
253 Ser Val Pro Thr Leu Glu Gln Leu Glu Lys Leu Lys Lys Met Gly Asp  
254 85 90 95  
257 Leu Pro Arg Asp Arg Ala Gly Asn Glu Gly Met Ala Leu Leu Ala Phe  
258 100 105 110  
261 Leu Tyr Leu Tyr Leu Ala Ile Cys Arg Lys Gln Arg Thr Leu Pro Ser  
262 115 120 125  
265 Leu Asp Met Val Val Trp Ser Glu Leu Pro Pro Gly Ala Gly Leu Gly  
266 130 135 140  
269 Ser Ser Ala Ala Tyr Ser Val Cys Leu Ala Ala Leu Leu Thr Ala

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/560,726

DATE: 04/14/2006  
TIME: 10:45:46

Input Set : A:\21788wo.ST25.txt  
Output Set: N:\CRF4\04142006\J560726.raw

270 145 150 155 160  
 273 Cys Glu Glu Val Ser Asn Pro Leu Lys Asp Gly Val Ser Val Ser Arg  
 274 165 170 175  
 277 Trp Pro Glu Glu Asp Leu Lys Ser Ile Asn Lys Trp Ala Phe Glu Gly  
 278 180 185 190  
 281 Glu Arg Val Ile His Gly Asn Pro Ser Gly Val Asp Asn Ala Val Ser  
 282 195 200 205  
 285 Thr Trp Gly Gly Ala Leu Arg Phe Gln Gln Gly Thr Met Ser Ser Leu  
 286 210 215 220  
 289 Lys Ser Leu Pro Ser Leu Gln Ile Leu Leu Thr Asn Thr Lys Val Pro  
 290 225 230 235 240  
 293 Arg Ser Thr Lys Ala Leu Val Ala Ala Val Arg Ser Arg Leu Thr Lys  
 294 245 250 255  
 297 Phe Pro Glu Ile Val Ala Pro Leu Leu Thr Ser Ile Asp Ala Ile Ser  
 298 260 265 270  
 301 Leu Glu Cys Glu Arg Val Leu Gly Glu Met Val Ala Ala Pro Val Pro  
 302 275 280 285  
 305 Glu Gln Tyr Leu Val Leu Glu Glu Leu Ile Asp Met Asn Gln His His  
 306 290 295 300  
 309 Leu Asn Ala Leu Gly Val Gly His Asn Ser Leu Asp Gln Leu Cys Gln  
 310 305 310 315 320  
 313 Val Thr Ala Ala His Gly Leu His Ser Lys Leu Thr Gly Ala Gly Gly  
 314 325 330 335  
 317 Gly Gly Cys Gly Ile Thr Leu Leu Lys Pro Gly Leu Glu Gln Ala Thr  
 318 340 345 350  
 321 Val Glu Ala Ala Lys Gln Ala Leu Thr Ser Cys Gly Phe Asp Cys Trp  
 322 355 360 365  
 325 Glu Thr Ser Ile Gly Ala Pro Gly Val Ser Thr His Ser Ala Ala Ala  
 326 370 375 380  
 329 Val Gly Asp Pro Val Arg Gln Ala Leu Gly Leu  
 330 385 390 395  
 333 <210> SEQ ID NO: 4  
 334 <211> LENGTH: 395  
 335 <212> TYPE: PRT  
 336 <213> ORGANISM: rat  
 338 <400> SEQUENCE: 4  
 340 Met Leu Ser Glu Val Leu Leu Val Ser Ala Pro Gly Lys Val Ile Leu  
 341 1 5 10 15  
 344 His Gly Glu His Ala Val Val His Gly Lys Val Ala Leu Ala Val Ala  
 345 20 25 30  
 348 Leu Asn Leu Arg Thr Phe Leu Val Leu Arg Pro Gln Ser Asn Gly Lys  
 349 35 40 45  
 352 Val Ser Leu Asn Leu Pro Asn Val Gly Ile Lys Gln Val Trp Asp Val  
 353 50 55 60  
 356 Ala Thr Leu Gln Leu Leu Asp Thr Gly Phe Leu Glu Gln Gly Asp Val  
 357 65 70 75 80  
 360 Pro Ala Pro Thr Leu Glu Gln Leu Glu Lys Leu Lys Lys Val Ala Gly  
 361 85 90 95  
 364 Leu Pro Arg Asp Cys Val Gly Asn Glu Gly Leu Ser Leu Ala Phe

**RAW SEQUENCE LISTING**  
 PATENT APPLICATION: US/10/560,726

DATE: 04/14/2006  
 TIME: 10:45:46

Input Set : A:\21788wo.ST25.txt  
 Output Set: N:\CRF4\04142006\J560726.raw

365 100 105 110  
 368 Leu Tyr Leu Tyr Leu Ala Ile Cys Arg Lys Gln Arg Thr Leu Pro Ser  
 369 115 120 125  
 372 Leu Asp Ile Met Val Trp Ser Glu Leu Pro Pro Gly Ala Gly Leu Gly  
 373 130 135 140  
 376 Ser Ser Ala Ala Tyr Ser Val Cys Val Ala Ala Leu Leu Thr Ala  
 377 145 150 155 160  
 380 Cys Glu Glu Val Thr Asn Pro Leu Lys Asp Arg Gly Ser Ile Gly Ser  
 381 165 170 175  
 384 Trp Pro Glu Glu Asp Leu Lys Ser Ile Asn Lys Trp Ala Tyr Glu Gly  
 385 180 185 190  
 388 Glu Arg Val Ile His Gly Asn Pro Ser Gly Val Asp Asn Ser Val Ser  
 389 195 200 205  
 392 Thr Trp Gly Gly Ala Leu Arg Tyr Gln Gln Gly Lys Met Ser Ser Leu  
 393 210 215 220  
 396 Lys Arg Leu Pro Ala Leu Gln Ile Leu Leu Thr Asn Thr Lys Val Pro  
 397 225 230 235 240  
 400 Arg Ser Thr Lys Ala Leu Val Ala Gly Val Arg Ser Arg Leu Ile Lys  
 401 245 250 255  
 404 Phe Pro Glu Ile Met Ala Pro Leu Leu Thr Ser Ile Asp Ala Ile Ser  
 405 260 265 270  
 408 Leu Glu Cys Glu Arg Val Leu Gly Glu Met Ala Ala Ala Pro Val Pro  
 409 275 280 285  
 412 Glu Gln Tyr Leu Val Leu Glu Leu Met Asp Met Asn Gln His His  
 413 290 295 300  
 416 Leu Asn Ala Leu Gly Val Gly His Ala Ser Leu Asp Gln Leu Cys Gln  
 417 305 310 315 320  
 420 Val Thr Ala Ala His Gly Leu His Ser Lys Leu Thr Gly Ala Gly Gly  
 421 325 330 335  
 424 Gly Gly Cys Gly Ile Thr Leu Leu Lys Pro Gly Leu Glu Arg Ala Lys  
 425 340 345 350  
 428 Val Glu Ala Ala Lys Gln Ala Leu Thr Gly Cys Gly Phe Asp Cys Trp  
 429 355 360 365  
 432 Glu Thr Ser Ile Gly Ala Pro Gly Val Ser Met His Ser Ala Thr Ser  
 433 370 375 380  
 436 Ile Glu Asp Pro Val Arg Gln Ala Leu Gly Leu  
 437 385 390 395  
 440 <210> SEQ ID NO: 5  
 441 <211> LENGTH: 378  
 442 <212> TYPE: PRT  
 443 <213> ORGANISM: Arabidopsis thaliana  
 445 <400> SEQUENCE: 5  
 447 Met Glu Val Lys Ala Arg Ala Pro Gly Lys Ile Ile Leu Ala Gly Glu  
 448 1 5 10 15  
 451 His Ala Val Val His Gly Ser Thr Ala Val Ala Ala Ile Asp Leu  
 452 20 25 30  
 455 Tyr Thr Tyr Val Thr Leu Arg Phe Pro Leu Pro Ser Ala Glu Asn Asn  
 456 35 40 45  
 459 Asp Arg Leu Thr Leu Gln Leu Lys Asp Ile Ser Leu Glu Phe Ser Trp

**VERIFICATION SUMMARY** DATE: 04/14/2006  
PATENT APPLICATION: US/10/560,726 TIME: 10:45:47

Input Set : A:\21788wo.ST25.txt  
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L:9 M:270 C: Current Application Number differs, Replaced Current Application No  
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date